

AMENDMENT TO SPECIFICATION

IN THE SPECIFICATION:

A marked-up copy of the changes to selected paragraph(s) is provided below. Please enter these changes to the specification in the record.

Paragraph spanning pages 1 and 2.

Conventionally, in order to maintain the brake fluid pressure of the wheel brake temporarily even after removal of the brake operation, as a vehicle brake fluid brake maintaining apparatus provided with a normally-open-type electromagnetic valve, there are known the cited related inventions (JP-A-2000-190828 and JP-A-2001-225731). In the case of the normally-open-type electromagnetic valve used in these conventional related arts, in the interior of a housing which is disposed in a brake fluid flow passage between a master cylinder and a wheel brake, there is disposed a valve seat including a communication hole which is formed in the central portion of the valve seat so as to allow the master cylinder side and wheel brake side to communicate with each other; and, a spherical-shaped valve body is disposed so as to face the valve seat. The valve body, when the normally-open-type electromagnetic valve is not in operation, is normally energized by the energizing force of a return spring in a direction where it is ~~moves~~ moved apart from the valve seat, and thus the communication hole is held in the open state. Thanks to this, in the braking operation, the brake fluid pressure is transmitted from the master cylinder through the communication hole to the wheel brake, thereby being able to brake the wheels of the vehicle.

Paragraph spanning pages 3 and 4.

After closing of the relief valve, by returning the brake fluid pressure of the wheel brake to the master cylinder ~~bit by bit~~ gradually through an orifice consisting of a minute recessed groove formed in a flow passage for the brake fluid pressure, not only can the vehicle ~~can~~ be started smoothly but also the brake fluid pressure of the wheel brake can be lowered bit by bit down to the value of the brake fluid pressure that is indispensably necessary ~~for~~ to help ~~of~~ the start of the vehicle. By lowering the brake fluid pressure gradually in this manner, when the driver steps on an accelerator pedal, the backing movement of the vehicle in the ascending slope and the sudden start of the vehicle in the descending slope can be made hard to occur and also the dragging of the braking force can be restricted, thereby allowing the vehicle to start smoothly.

Paragraph spanning pages 4 and 5.

However, in the above related art, since the relief mechanism is structured in such a manner that the valve members and energizing spring are disposed in a narrow space within a movable core and the orifice is formed by working a recessed groove in the valve seat, the number of parts of the brake fluid pressure maintaining apparatus as well as the number of working and assembling steps thereof are large. ~~Especially~~ Also, working of the recessed groove for use as an orifice requires high level of working accuracy and, at the same time, because the flow quantity of the brake fluid cannot be predicted, after manufacture of a product, the brake fluid must be actually made to flow in order to check the flow quantity of the brake fluid, which provides a limit on enhancement in the

productivity. Also, according to the type of a vehicle, such as the weight of the vehicle on which the brake fluid pressure maintaining apparatus is to be mounted, the energizing force of the energizing spring of the relief valve and the depth of the orifice vary, which makes it necessary to set the specifications of a plurality of structures; that is, it is troublesome to manufacture the brake fluid pressure maintaining apparatus according to the above related art.

Paragraph at page 8, lines 10-14:

Further, the normally-open-type electromagnetic valve may also be structured such that it ~~to thereby~~ decreases the attracting force due to gradually reducing the value of the current to be applied to the electromagnetic coil according to a previously set function.

Paragraph at page 12, lines 9-14:

~~By the way, as~~ As described above, even when the normally-open-type electromagnetic valve is held closed, in the case where the driver increases the stepping force on the brake pedal, the brake fluid pressure from the master cylinder is transmitted through the check valve to the wheel brake to thereby be able to increase the braking force.

Paragraph spanning pages 12 and 13:

~~By the way, in~~ In case where the driver steps on the brake pedal more strongly than necessary, the brake fluid pressure of the wheel brake can be excessively higher than a previously set given brake fluid pressure

due to the above-mentioned attracting force. In this case, the relief function of the normally-open-type electromagnetic valve is put into operation. When the relief function is in operation, the normally-open-type electromagnetic valve receives the brake fluid pressure of the wheel brake higher than the attracting force and is thereby opened against the attracting force, so that the brake fluid pressure of the wheel brake is returned to the master cylinder. Thanks to this return of the brake fluid pressure, the brake fluid pressure of the wheel brake can be lowered down to the given value. Also, in the case where the brake fluid pressure is lowered down to the given value, the attracting force is put into operation again to thereby close the normally-open-type electromagnetic valve, the brake fluid pressure of a given value can be maintained on the wheel brake side.

Paragraph at page 14, lines 7-21:

Also, after start of the vehicle, in the case where the electromagnetic coil is deenergized to thereby remove the attracting force, the normally-open-type electromagnetic valve is opened and the brake fluid pressure remaining in the wheel brake returns at a burst to the master cylinder through the normally-open-type electromagnetic valve that is held open, which can reduce the dragging of the brake and thus can start the vehicle smoothly. Also, the opening operation of the normally-open-type electromagnetic valve may be executed at the same time when the driver steps on the accelerator pedal, or, as a fail ~~and~~ safe action, may be carried out in a given period of time after the driver steps on the accelerator pedal, or may be performed at the time when the vehicle reaches a given speed in order to be able to reduce the unnecessary dragging of the brakes.

Paragraph spanning pages 14 and 15:

~~By the way, in~~ In case where the brake fluid pressure retaining apparatus is structured such that, during the time when the driver releases the foot from the brake pedal and steps on the accelerator pedal, the brake fluid pressure of the wheel brake can be maintained, the driver is able to start the vehicle on the ascending slope easily. And, not only in the case of the MT vehicle, but also in the case of the AT vehicle and CVT vehicle in which an engine stops when the vehicle stops so as to prevent a creep phenomenon or an idling operation, a proper braking force can be maintained during the time when the engine is put into operation again due to release of the foot from the brake pedal to thereby generate a creep force, the backing motion of the vehicle can be prevented and thus the smooth start of the vehicle on the ascending slope is possible.

Paragraph spanning pages 16 and 17:

However, even in the case where the normally-open-type electromagnetic valve is closed, by releasing the foot from the brake pedal or by loosening the stepping force on the brake pedal, the relief function of the normally-open-type electromagnetic valve is put into operation to thereby reduce the brake fluid pressure of the wheel brake down to a given value. The reduction of the brake fluid pressure reduces the dragging of the brake and, therefore, even in the case where the driver does not step on the accelerator pedal, the vehicle is allowed to move downward gradually on the descending slope, which makes it possible for the vehicle to start smoothly on the descending slope. Also, not only in the case of the start on the descending slope but also in the case of the start on the flat road,

the temporary maintaining function of the brake fluid pressure after removal of the braking operation can prevent the sudden start of the vehicle, which makes it possible for the vehicle to start smoothly.

Paragraph at page 20, lines 5-23:

Also, in the above-mentioned normally-open-type electromagnetic valve, the mutually attracting surfaces of the fixed and movable cores may be formed in a flat surface. However, since the attracting force acting between the fixed and movable cores is in ~~inversion~~ inverse proportion to the distance from the fixed core, in order to move the movable core situated most distant from the fixed core in the fixed core direction, ~~there is necessary~~ an electromagnetic force is necessary which is large to a certain degree. Therefore, a recessed portion including a ring-shaped wall surface is formed in one of the mutually attracting surfaces of the fixed and movable cores, a projecting portion to be inserted into the recessed portion is formed in the other, and the fixed and movable cores are arranged in such a manner that the projecting portion faces the ring-shaped wall surface. And, the fixed and movable cores may be disposed such that, when the movable core is attracted by the fixed core, the projecting portion of the fixed or movable core can be inserted into the recessed portion and the ring-shaped wall surface can be situated on the outer periphery of the projecting portion.

Paragraph at page 21, lines 14-24:

Also, ~~as the~~ any conventional check valve may be used to transmit ~~which transmits~~ the brake fluid pressure to the wheel brake from the

master cylinder according to the stepping force on the brake pedal, ~~there may be used any one of the conventionally known check valves.~~

However, for example, in the case of a cup-type seal which allows only the flow of the brake fluid pressure from the master cylinder to the wheel brake but prevents the return of the brake fluid pressure from the wheel brake to the master cylinder, the check valve can have a simple structure and can be installed easily, so that the brake fluid pressure maintaining apparatus can be made simple and compact.

Paragraph at page 24, lines 7-17:

Now, describing the structure of the brake fluid pressure maintaining apparatus (5) with reference to Figs. 1 to 3, reference character (10) designates a block-like support body made of an aluminum alloy or the like; and, within a stepped mounting hole (11) recessedly formed in one surface of the support body (10), there is stored a normally-open-type electromagnetic valve (6) which is composed of a valve part (12) and a solenoid part (13). ~~By the way, in~~ In the present specification, the opening part (14) side of the mounting hole (11) is regarded as the upward side, while the bottom part (15) side is regarded as the downward side.

Paragraph at page 26, lines 4-19:

On the other hand, in the interior of the housing (16), there is mounted a valve shaft (30) made of non-magnetic material in such a manner that it can be slid[[ed]] in the axial direction; and, between the valve shaft (30) and valve seat member (26), in the interior of the housing

(16), there is formed a valve chamber (31) so as to face the valve seat (28). And, within the valve chamber (31), to the lower end of the valve shaft (30), there is fixed an inverted-conical-shaped valve body (32) which can be seated on the tapered valve seat (28). Further, within the valve chamber (31), between the valve seat member (26) and valve shaft (30), there is interposed a valve-opening energizing spring (33) which pressure energizes the valve shaft (30) in the opposite direction to the valve seat member (26); and, normally, the valve body (32) is separated from the valve seat (28) and the valve hole (27) is opened due to the pressure energizing force of the valve-opening energizing spring (33).

Paragraph at page 28, lines 4-15:

Also, in order to prevent a pressure difference ~~form~~ from being generated between the interior of the housing (16) and the interior of the guide tube (42) due to the movement of the movable core (41), in each of the outer peripheral surfaces of the movable core (41) and valve shaft (30), there is or are recessedly formed one or more flow groove(s) (50) (51) in the axial direction thereof. Such flow grooves (50) (51) allow the brake fluid to flow freely between the housing (16) and guide tube (42), which can prevent the generation of the pressure difference between the interiors of the housing (16) and guide tube (42), thereby permitting the smooth movements of the movable core (41) and valve shaft (30).